

CLAIM AMENDMENTS

Claim 1 (Currently Amended)

A photothermographic material comprising on a support a light-sensitive layer containing a light-insensitive silver salt of an aliphatic carboxylic acid and light-sensitive silver halide grains, a reducing agent for silver ions and a binder,

wherein the silver halide grains comprise an electron trapping organic dopant capable of trapping an electron inside of the grains,

wherein the organic dopant is an organic compound comprising a chalcogen or nitrogen containing organic compound,

wherein the organic dopant is added after nucleus formation and during grain growth so that the organic dopant is inside the silver halide grains,

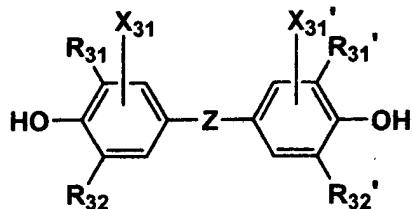
wherein the photothermographic material further comprises a compound represented by the following formula (1), and the photothermographic material meets the following requirement:

$$S_B/S_A \leq 0.2$$

wherein S_A represents a sensitivity obtained when exposed to white light (4874K) for 30 sec. through an optical wedge, and then developed at 110 °C for 15 sec., and S_B represents a sensitivity obtained when subjected to a heat treatment at 110 °C for 15 sec., and exposed to white light (4874K) for 30 sec.

through an optical wedge, and then developed at 110 °C for 15 sec;

formula (1)



wherein Z is -S- or -C(R₃₃)(R_{33'})-, in which R₃₃ and R_{33'} are each a hydrogen atom or a substituent; R₃₁, R₃₂, R_{31'} and R_{32'} are each a substituent; X₃₁ and X_{31'} are each a hydrogen atom or a substituent.

Claim 2 (Original)

The photothermographic material of claim 1, wherein in formula (1), R₃₃ and R_{33'} are each a hydrogen atom, or an alkyl or cycloalkyl group.

Claim 3 (Original)

The photothermographic material of claim 1, wherein in formula (1), at least one of R₃₃ and R_{33'} is a hydrogen atom and the other one is a hydrogen atom, or an alkyl or cycloalkyl group.

Claim 4 (Original)

The photothermographic material of claim 1, wherein in formula (1), R_{31} , R_{32} , R_{31}' and R_{32}' are each an alkyl group, alkenyl group, alkynyl group, cycloalkyl group, cycloalkenyl group, aryl group or heterocyclic group.

Claim 5 (Cancelled)

Claim 6 (Currently Amended)

The photothermographic material of claim 1, wherein the organic dopant is contained in an amount of 1×10^{-8} to 1×10^{-1} mol per mol of silver.

Claims 7-9 (Cancelled)

Claim 10 (Original)

The photothermographic material of claim 1, wherein the silver halide grains are silver bromide or silver iodobromide.

Claim 11 (Original)

The photothermographic material of claim 1, wherein grains having a grain size of 0.04 to 0.07 μm account for at least 50% by weight of the silver halide gains, based on silver.

Claim 12 (Original)

The photothermographic material of claim 1, wherein the aliphatic carboxylic acid exhibits a melting point of 70 to 90 °C.

Claim 13 (Original)

The photothermographic material of claim 1, wherein the silver salt of an aliphatic carboxylic acid is comprised of grains having an average equivalent circular diameter of 0.05 to 0.8 µm and an average thickness of 0.005 to 0.07 µm.